

### In the Claims

Claims 1-11. (cancelled)

12. (currently amended) A method for producing a blend output for use by a manufacturer to blend component ingredients to form a blended product, comprising:

(a) downloading, over a network, time-sensitive data representing the current cost of at least one material whose price fluctuates based at least in part on market conditions;

(b) using said downloaded current cost information to calculate an actual cost of blending said product;

(c) automatically calculating the difference between said actual blend cost and a model blend cost; and

(d) ~~making a decision to blend said~~ formulating a blend output to form a blended product based at least in part on said calculation.

13. (original) The method as in claim 11 wherein said material comprises grain and said downloaded cost data comprises a grain cost card.

14. (original) A system for controlling grain mixing, said system being coupled over a data network to a source of current grain prices, said system receiving information relating to currently prevailing grain cost, said system including:

a blend processor which, based on desired mix and source bin designations and said currently prevailing grain cost, calculates a blend cost and compares said blend cost with a model cost, said blend processor generating a blend mix output that specifies the amount of each of plural grain lots to mix in order to achieve said desired mix; and

a mass storage device operatively coupled to said blend processor, said mass storage device storing historical data concerning previous blends.

15. (original) The method as in claim 13 wherein said blend processor retrieves currently prevailing grain cost data via said data network at least once a day.
16. (original) The system of claim 13 wherein said blend processor generates a blend entry data form providing interactive user input/output.
17. (original) The system as in claim 13 wherein said blend mix output includes number of bushel information, percent protein information, and grain moisture information.
18. (original) The system as in claim 13 wherein said blend mix output includes information indicating a difference between actual blend cost and model blend cost.
19. (original) The system as in claim 13 wherein said blend processor further produces a blend summary sheet for previous blends.
20. (original) The system of claim 13 wherein said blend processor prints a blend mix sheet and a blend summary sheet.
21. (original) The system of claim 13 wherein said grain comprises wheat and said blend processor specifies a blend of plural wheat lots to provide flour of a desired grade.
22. (new) A method of providing a blend mix output for a food product comprising:
  - a) providing a predetermined recipe for a food product comprising ingredients, wherein the recipe is has associated therewith predetermined functional and nutritional targets for performance of the food product;
  - b) providing a supply of ingredients from a number of sources;
  - c) calculating at least a first element of ingredients within the supply;
  - d) optimizing ingredient selection by selecting amounts of ingredient to be used from the supply based on the calculation of step c) to optimize the value of the first element of step c) while meeting the predetermined functional and nutritional targets for performance of the food product; and

e) providing a blend mix output that specifies the amount of each ingredient as selected in optimizing step d).

23. (new) A method for providing a blend mix output as recited in claim 22, wherein said first element is an approximate cost of using the ingredient.

24. (new) A method for providing a blend mix output as recited in claim 22, wherein the first element relates to nutritional properties of the ingredient.

25. (new) A method for providing a blend mix output as recited in claim 22, wherein the first element relates to functional properties of the ingredient.

26. (new) A method for providing a blend mix output as recited in claim 24, wherein the nutritional property is protein content.

27. (new) A method for providing a blend mix output as recited in claim 24, wherein the nutritional property is fiber content.

28. (new) A method for providing a blend mix output as recited in claim 22, wherein the first element relates to a physical property of the ingredient.

29. (new) A method for providing a blend mix output as recited in claim 28, wherein the physical property is moisture content.

30. (new) A method for providing a blend mix output as recited in claim 28, wherein the physical property is weight.

31. (new) A method for providing a blend mix output as recited in claim 22, wherein the recipe is for flour manufacture.

32. (new) A method for providing a blend mix output as recited in claim 22, wherein the ingredient is a grain.